



State of Idaho

DEPARTMENT OF WATER RESOURCES

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SOUTHERN REGION

WD 130 2004  
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AUG 27 2004

DEPARTMENT OF  
WATER RESOURCES

DIRK KEMPTHORNE  
Governor

KARL J. DREHER  
Director

August 26, 2004

Hoyt Pugh  
PO Box P  
Shoshone ID 83352

Re: Letter of Complaint

Dear Mr. Pugh:

As you know Shane Bendixsen, geo-hydrologist with IDWR, met with you and others on August 19<sup>th</sup>. Shane conducted a technical site review of your well and Glanbia's well and reviewed records available to IDWR. Please find enclosed a copy of a memorandum Shane has prepared based on his technical review.

Based on this analysis it is concluded your well problems are most probably associated with the recent extended period of drought and not caused by pumping of the Glanbia well.

Due to your concerns and others in the area I understand IDWR plans to increase monitoring of ground water levels in the Richfield area. I understand a local well is to be added to IDWR's monitoring network. I understand you have deepened your well and hopefully improved your well's reliability.

Respectfully,

Allen Merritt, PE  
Southern Region Manager

CC: Shane Bendixsen – IDWR Hydrology  
Glen Saxton, Tim Luke – IDWR State Office  
Cindy Yenter – Watermaster District 130  
Rick Warren – Glanbia  
Wendy Jaquet, Clint Stennett, Tim Ridinger

## MEMORANDUM

August 24, 2004

To: Allen Merritt  
From: Shane Bendixsen  
Subject: **Pugh Well Near Richfield, Idaho, Lincoln County.**

It is my understanding that Mr. Hoyt Pugh along with other users of a shared domestic / stock well, had to deepen their well 140 feet in July 2004. Mr. Pugh and the other users believe that Glanbia Foods new irrigation well caused the water table to decline and resulted in their well going dry. The following is a brief hydrologic review.

Attachment #1 presents the location for the Pugh and Glanbia well. They are approximately 2.5 to 3 miles apart. It is assumed that they are in the same regional aquifer based on the depth to water from land surface.

The Glanbia well was completed on September 2003. In October 2003 Brockway Engineering from Twin Falls, Idaho was contracted to run a step drawdown pump test on the well. It is assumed this was done to assist in well design. Four step discharges were used: 650, 1450, 2060, and 2340 gallons per minute (gpm). Each step was run until drawdown ceased and then the well was shutdown until total recovery was achieved before the next step was run. The test lasted for approximately seven hours. Maximum drawdown for the steps ranged from 0.18 to 0.60 feet. An airline was used to measure depth to water. This is not considered the most accurate method to measure drawdown, but the order magnitude is still readily apparent. A monitoring well (the Anderson well, Attachment #1) was also monitored. The water level rose 0.24 feet during the test. This could have been related to barometric changes or well recovery.

Brockway Engineering in their analysis also used an analytical model to predict draw down over time. The model suggest that at a discharge of 3500 gpm for 50 days the drawdown would be 0.19 feet one mile from the production well. While this is only an approximation, the magnitude is again apparent.

Attachment #2 presents ground water hydrographs for the Glanbia production well. One is short term, the other long term. The short term is since production began; the long term is since the well was completed. Very little change has occurred.

Attachment #3 presents ground water hydrographs on a regional basis. Currently there is no ground water monitoring in the immediate area, but it is assumed these hydrographs

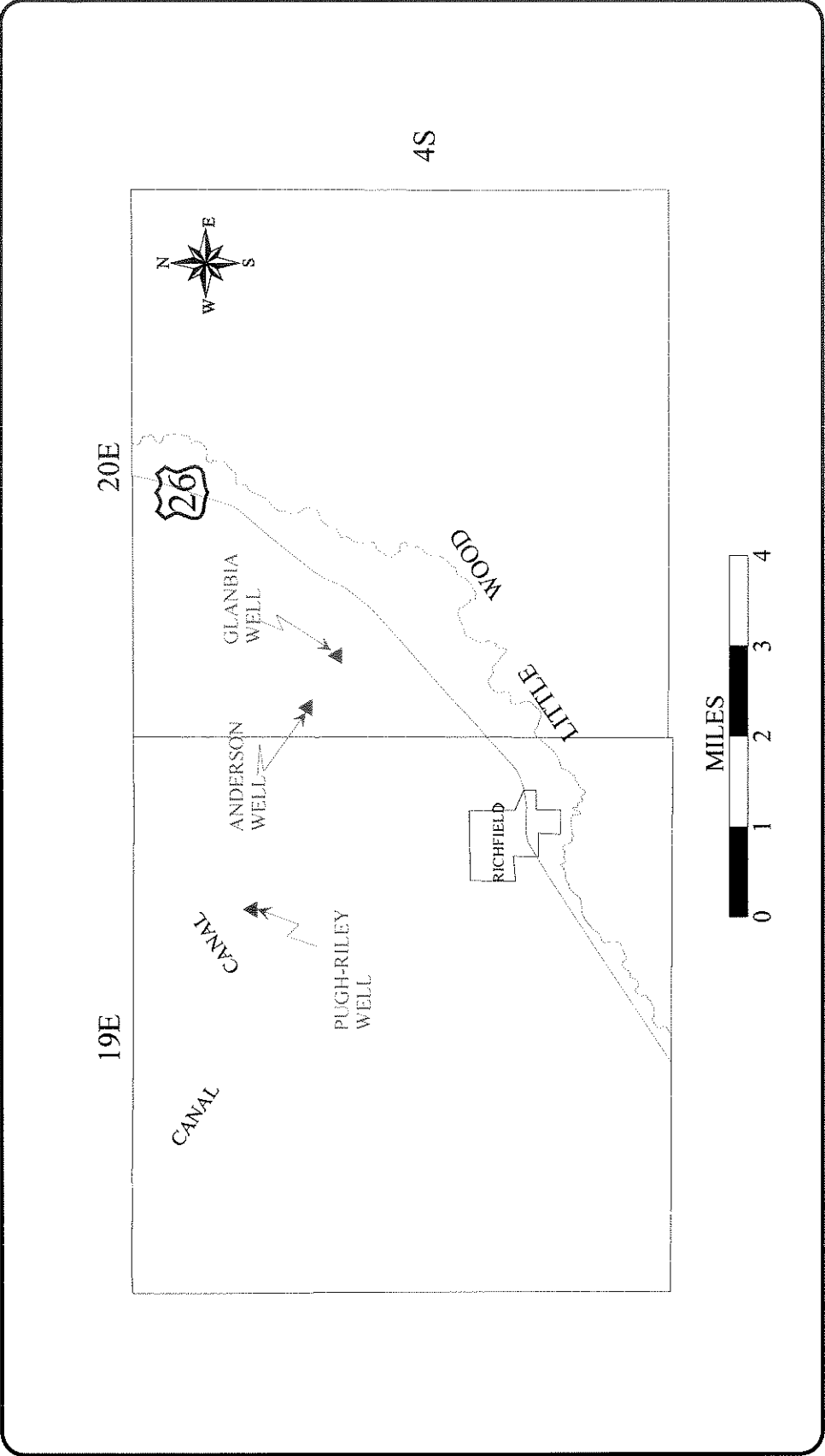
are representative of the regional aquifer. The Magic Valley area is experiencing the fifth year of drought or below normal runoff conditions. Ground water levels have fallen in some places more than 50 feet and below the level of the last drought, which ended in 1993. Numerous wells in southern Idaho have been deepened or replaced over the past several years.

On August 19, 2004 IDWR staff visited the production well with staff from Glanbia and Rod Riley who shares the well with Mr. Pugh. The well was re-measured with the pump on and off. Depths to water were approximately the same as Brockway Engineering's pump test.

Based on the above discussion it is highly unlikely the Glanbia production well has any direct influence on the surrounding wells. Hydrographs for the Glanbia well since it has been in production suggest little if any change. Brockway Engineering's pump test and model suggest the same thing. IDWR Staff confirmed the pump test.

More monitoring is needed for the area to verify what the data already suggests. Currently IDWR and Glanbia staff is working to bring the Anderson and one other well into the state cooperative program with the USGS. I will inform all parties involved when this is completed.

In conclusion, the Pugh well probably went dry due to the current drought.



ATTACHMENT #1

